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CLINICAL INVESTIGATION PROGRAM REPORT.(U)
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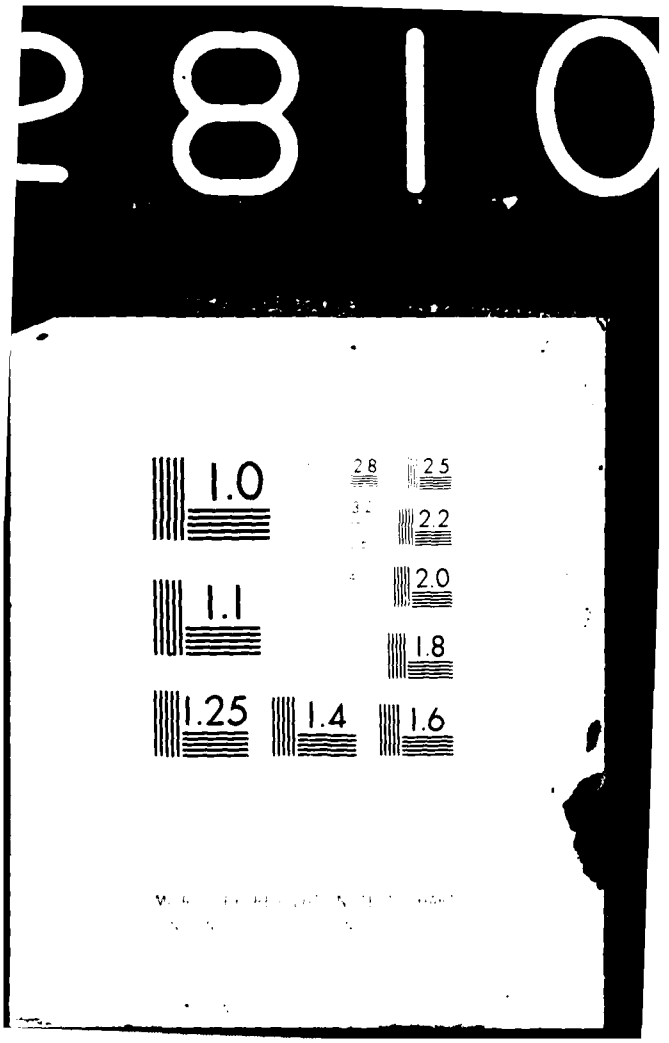
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Department of Clinical Investigation
Annual Progress Report
Fiscal Year 1981

Golden Gateway to Health

Letterman Army Medical Center Presidio of San Francisco California 94129

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

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19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Unit Summary; Detail Sheet (Study Objective, Technical Approach, Progress, Status).

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This report identifies the research activities conducted by Letterman Army Medical Center investigators through protocols approved by the Clinical Investigation and Human Use Committees during Fiscal Year 1981.

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

CLINICAL INVESTIGATION
PROGRAM REPORT

1 October 1981

CONTROL SYMBOL: MED-300

DEPARTMENT OF CLINICAL INVESTIGATION
LETTERMAN ARMY MEDICAL CENTER
PRESIDIO OF SAN FRANCISCO, CALIFORNIA 94129

FOREWORD

Over the past 50 years, the United States has led the world in the advancement of medical science and technology. This has been due largely to the tremendous support by both the government and private industry and a continually expanding input of bright, young physicians and Ph.D.'s who found the reward of research more gratifying than the lure of large salaries offered by private practice and private industry. When funds are obtainable without much headache and the committment of the government and commercial institutions to maintainence of our technological and informational superiority is obvious to all, the frustrations of research endeavors are forgotten easily. However, over the last 5 to 10 years funding has diminished greatly and we have seen a serious reduction in qualified individual seeking careers at clinical and applied research institutions. Educational institutions are experiencing ever increasing difficulty in finding high caliber individuals willing to sacrifice for a career in academic medicine. The result cannot fail to be a loss in momentum and a gradual loss of our superiority in the advancement of medicine.

We, who are committed to medical research, are fortunate to be involved presently in the field of clinical and basic research in the Army. The military medical system continues to function well at a time when public medical care facilities and institutions are in economic upheaval. We have the facilities, funds, and mandate to encourage young physicians-in-training to develop interest and experience in laboratory and/or clinical investigative efforts. The advancements made in medical science as a result of these efforts will result unquestionably in improvement in the care we can offer to our patients. Moreover, at a time when the AMA Residency Accreditation Committees are commencing to recognize the need for physicians-in-training to have some fundamental experience in research to round out their training, we recognize our responsibility in providing the support for these residents to gain that experience.

Being involved in physician education at an Army Medical Center is today an important responsibility. We, in clinical investigation, are in the unique position of having the potential to influence positively a large number of young physicians at a time when they are most open to suggestion. By making research endeavors interesting, satisfying, and, most importantly, easy to undertake, we can serve to reverse the trend away from medical investigation. In the "old days" the Army Medical Corps was recognized as a leading contributor to the advancements made in the science of medicine. We are currently in a position to reestablish our role as a significant

contributor to medical science. We are in a singular situation, today, in that we have the committment of the Medical Corps, financially and logistically, to this role. Perhaps this is one reason why more and more civilian academicians are seeking employment in military institutions.

In line with these thoughts, Fiscal Year 81 has been a year of tremendous growth in the area of clinical investigation at LAMC. The Clinical Investigation Service became a Department with a staff of 11 and two more being recruited. We now have functioning an RIA laboratory, an animal physiology laboratory and a cell culture laboratory, whereas last year we could offer none of these capabilities. We have tripled already our laboratory space and will move soon to a facility in which we will have tripled again the present space. Much equipment has become available and our capabilities are still expanding. We have a vision of what a clinical investigation department should and can do in support of a medical center and the physicians who learn and practice therein. Fortunately, Colonel Norman Ream has had the same vision; and so, thanks to his guidance, encouragement and support we are well on our way, finally, at Letterman Army Medical Center.

CRAIG A. WINKEL
LTC, MC
Chief, Department of Clinical Investigation

Unit Summary - Fiscal Year 1981

A. Objectives

The objectives of the Department of Clinical Investigation are as follows:

1. To provide new information to improve the quality of care rendered to patients.

2. To assure the highest level of professional and ethical standards in the conduct of human and animal research.

3. To encourage and support participation by house staff and teaching staff in the conduct of clinical and applied basic science research.

4. To develop an atmosphere conducive to recruitment and retention of competent, motivated personnel.

5. To function as an important motivating force in the education of house staff.

6. To provide technical and logistical support for investigators assigned currently to regional MEDDAC units.

7. To maintain the high standards required for accreditation of advanced health programs.

B. Technical Approach

All investigational and training activities which fall within the perview of the Department of Clinical Investigation are reviewed under the guidance of AR 40-7, AR 40-38, AR 40-25, AR 70-18 and HSC Reg 40-23. If approved for conduct and funding, all are monitored carefully to insure strict compliance with applicable regulations.

C. Staffing

Winkel, Craig A.	LTC	60J9B	Chief, Reproductive Endocrinologist
Danley, David L.	CPT	68C00	Laboratory Director/Immunologist
---	SP6	92B30	Med Lab NCO
Stinnett, Therese M.	SP5	01H20	NCOIC, Bio Sci Asst
---	SP5	91T20	Animal Care Specialist
Ickes, Linda A.	SP4	01H10	Bio Sci Asst
Moore, Marjorie K.	PFC	01H10	Bio Sci Asst
Wade, Charles	GS12		Research Physiologist
Brooks, Daniel E.	GS9	00644	Med Tech
Coopes, Valerie C.	GS8	00404	Bio Lab Animal Tech
Polakoff, Josephine A.	GS7	00644	Med Tech
Steadman, Faye J.	GS5	00318	Secy Typ
Whiteley, John	GS4	00644	Med Tech

D. Funding Data, FY 81

Civilian Personnel to include benefits	$85,939.01
Consumable supplies	3,322.03
Other purchased services	60,126.81
Travel	513.18
Consultants	536.00
Minor MEDCASE	39,280.00
Major MEDCASE	104,010.30
Military	45,243.00
TOTAL:	$338,970.33

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DEPARTMENT OF SURGERY

Anesthesiology Service

Ophthalmology Service

Detail Summary Sheet

Date: 1 Oct 81 Prot No: Ci-81-01 Status: Ongoing

Title: The Role of Sex Hormone-Binding Globulin (SHBG) in the Pathogenesis of Benign Prostatic Hypertrophy (BPH).

Start Date: 14 Apr 81 Est. Comp. Date: June 1983

Principal Investigator: LTC Craig Winkel

Facility: LAMC

Dep/Sec: Clinical Investigation

Associate Investigators:
Dr. Pentti K. Siiteri, Ph. D.
Robert Agee, COL, MC

Key Words:
Sex hormone-binding globulin, SHBG, prostatic hypertrophy, BPH

Accumulative MEDCASE Cost:	OMA Cost:	Est Accumulative	Periodic Review Results:
None		$3,000	

Study Objective: The etiology of benign prostatic hypertrophy (BPH) remains to be elucidated completely. An important issue in this disease is that of the importance of sex hormones in the pathophysiology of BPH. In this investigation we seek to ascertain whether the percentage of free sex steroid, androgen & estrogen, is different among men with BPH compared to normal males. Moreover, we seek to ascertain differences, either qualitative or quantitiave, in SHBG in plasma of men with BPH compared to normal males.

Technical Approach: Samples of plasma are incubated with 3H-steroid and ^{14}C] glucose and subjected to centrifugal ultrafiltration through a dialysis membrane at 37C. The percentage of free estradiol, testosterone and progesterone in serum are estimated by comparing the ratio of ^{3}H-steroid to ^{14}C] glucose in the ultrafiltrate with the corresponding ratio in the serum retained by the dialysis membrane.

Progress: Study initiated and samples are being collected. No data to report at present time!

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: Ci-81-02 Status: Ongoing

Title: The Effect of Dietary Iron Restriction on Gastrointestinal Metmyoglobin (MetMb) Reductase Activity.

Start Date: 14 Jul 81 Est Comp Date: July 1982

Principal Investigators:
LTC Craig Winkel
COL Louis Hagler

Facility:
LAMC

Dept/Svc:
Dept. of Clinical Investigation

Associate Investigators:

Key Words:
Metmyoglobin reductase
Dietary iron restriction

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: $800

Periodic Results:

Study Objective: To obtain a more thorough understanding of the mechanisms which control gastrointestinal absorption of dietary iron. Therefore, we hope to ascertain (1) the effect of dietary iron restriction on levels of metmyoglobin reductase activity; (2) the function of metmyoglobin reductase in gut mucosa; and, (3) the importance of metmyoglobin in iron absorption.

Technical Approach: Male weanling rats were obtained at a weight of 50 g. They were divided into two groups. One group received an iron deficient diet for 7 weeks. The other group received an iron replete diet. At the end of this time period the rats were sacrificed and the gut mucosa was isolated. Metmyoglobin reductase activity was determined using spectrophotometric analysis of the reduction of metmyoglobin.

Progress: Study underway. No data to report at the present time.

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: Ci-81-03 Status: Ongoing

Title: Pharmacokinetics of Various Cephalosporins Employed for Treatment of Acute Pyelonephritis.

Start Date: 18 Aug 81 Est Comp Date: Indefinite

Principal Investigators:
LTC Craig A. Winkel
CPT Garry Boswell

Facility:
LAMC

Dep/Sec:
Dept. of Clinical Investigation

Associate Investigators:
LTC Richard Severson

Key Words:
Pharmacokinetics, cephalosporin, pyelonephritis

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: $2,000

Periodic Review Results:

Study Objective: The purpose of this study is to determine the usefulness of a computer modeling approach in selecting the optimum dose of a cephalosporin antibiotic in treating pyelonephritis. In addition, the variations in pharmacokinetics of a number of cephalosporins will be tested employing the computer model.

Technical Approach: Patients admitted to LAMC with a diagnosis of acute pyelonephritis will be entered into the study. They will receive, in a double blinded fashion, a first, second, or third generation cephalosporin antibiotic. Blood and urine samples will be obtained and antibiotic levels determined by standard techniques. These data will be entered into the computer model to determine clinical usefulness in predicting pharmacokinetics in vivo.

Progress: Study not yet begun.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: C-77-03 Status: Ongoing

Title: Evaluation of Amiodarone for the Therapy of Cardiac Arrhythmias

Start Date: Jul 1977 Est. Comp. Date: Indefinite

Principal Investigator: COL Samuel Sobol Facility: LAMC

Dept/Svc: Cardiology Service Associate Investigators: Louis Rakita, M.D.

Key Words: Amiodarone, Arrhythmias

Accumulative MEDCASE Cost: None Est Accumulative OMA Cost: None Periodic Review Results:

Study Objective: To control life-threatening or severely symptomatic cardiac arrhythmias which have not been responsive to the conventional and accepted forms of treatment or whose control is dependent upon the use of a drug which has been shown to be harmful to or in other ways not tolerated by the individual.

Technical Approach: Unchanged from FY 1980 report except as follows: Rapid reduction in dose to 200 mg qd after successful loading with 1400 mg qd resulted in breakthrough of a prolonged but self-terminating episode of ventricular tachycardia in one patient. Therefore, dosage is now gradually adjusted downward on a monthly basis after control achieved.

Progress: Since report of FY 1980, 4 additional patients were begun on Amiodarone and one previously discontinued due to adverse effect (headaches) was restarted at a lower dose. Arrhythmia control has been excellent in 3 of these patients; however one died due to aspiration pneumonia secondary to pre-existing esophageal disease and possibly complicated by orthostatic hypotension, pre-existing before Amiodarone treatment but possibly worsened by drug-induced bradycardia; his ventricular tachycardia was well controlled by the drug. The fourth patient is maintained at a low dose of Amiodarone which allows frequent PVC's but minimizes headaches. Three of those patients manifested neurologic symptoms - leg weakness and unsteadiness at high dose therapy, resolved or improved on lowering the dose. Another of our long-term patients has had some mild leg weakness which has remained stable.

Peripheral neuropathy is an increasingly recognized side effect of this drug with high chronic doses, but is always reversible on lowering the dose or discontinuing the drug. We are in the process of publishing our experience with the neurologic effects of Amiodarone (see below).

Currently then we are folloiwng 7 patients with severe arrhythmias on this drug at LAMC, of whom 6 are completely controlled and one partially controlled.

Publications and Presentations: (since last report)

1. Sobol, SM; Rakita, L: Comparison of dosage regimens for initiation of Amiodarone therpay in the treatment of refractory arrhythmias. (Abstract) Army Association of Cardiology, 10th Annual Session, May 20-22, 1981.

2. Rakita, L; Sobol, SM: Amiodarone treatment for refractory arrhythmias: Dose-ranging and importance of high initial dosage. (Abstract) Circulation 64 (Supp IV): 263, 1981.

3. Sobol, SM; Rakita, L: Pneumonitis and pulmonary fibrosis associated with Amiodarone: A possible complication of a new antiarrhythmic drug. Circulation (in press).

4. Martinez-Arizala, A; Sobol, SM; McCarty, GE; Nichols, BR; Rakita, L: Amiodarone neuropathy. Neurology (in press).

Detail Summary Sheet

Date: 1 Oct 81 Prot. No: C-77-04 Status: Ongoing

Title: Effects of Experimental Ischemic & Digitalis Toxic Arrhythmias of a New Antiarrhythmic Drug, Amiodarone.

Start Date: May 1977 Est. Comp. Date:

Principal Investigator:
COL Samuel Sobol

Facility:
LAMC

Dept/Svc: Cardiology

Associate Investigators:
COL William Heydorn

Key Words: Amiodarone, digitalis

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: $7500

Periodic Review Results:

Study Objectives: See report FY 1980.

Technical Approach: See report FY 1980. Phase 3 animals were prospectively studied to assess any effect on serum digoxin level in swine when Amiodarone given concommitantly. Amiodarone appeared to cause elevation of serum digoxin level.

Progress: See report FY 1980. No further work done beyond that reported in FY 1980. Results of assessment of digoxin - Amiodarone interaction will be incorporated in a clinical report of similar interaction in patients.

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: C-79-05 Status: Ongoing

Title: Nifedipine: To Determine Efficacy in the Management of Angina Pectoris (IND #9683).

Start Date: 23 Oct 79 Est Comp Date: Indefinite

Principal Investigator:
Herman L. Price, COL, MC

Facility:
LAMC

Dept/Svc:
Cardiology Service

Associate Investigators:
Samuel M. Sobol, COL, MC

Key Words:
Coronary artery spasm; Prinzmetal variant angina, Nifedipine, calcium (slow) channel blocking agent, myocardial ischemia

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: None

Periodic Results:

Study Objective: To evaluate the efficacy of nifedipine in the management of angina pectoris due to myocardial ischemia when coronary artery spasm may be a pathogenetic element and is refractory to conventional therapy, or when fixed obstructive coronary artery disease with or without coronary artery spasm is refractory to conventional therapy.

Technical Approach: After establishing the presence of transient myocardial ischemia due to coronary artery spasm and/or fixed obstructive coronary artery disease by conventional diagnostic methods, patients are treated with conventional methods of therapy. If they are refractory to or cannot tolerate conventional therapy, they may enter the investigational study after giving informed consent. The efficacy of the drug is determined by a diary maintained by the patient and/or objective diagnostic tests.

Progress: A total of eleven (11) patients have entered the study with the following results:

1. Partially or completely effective in relieving symptoms - 8 patients.
2. Ineffective - 2 patients, one of whom had fixed obstructive coronary disease and the other had normal coronary arteries. Both patients had

atypical chest pain and both patients have been dropped from the study.

3. Too early to deterime efficacy - 1 patient.

4. Deaths - 1 patient with fixed obstructive coronary disease.

5. Side effects requiring voluntary discontinuance from the study - 1 male patient who developed impotency while taking the drug. Another male developed impotency but continued in the study while being transferred to the care of an investigator in Florida.

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: E-79-04 Status: Completed

Title: The Determination of the Distribution of Metmyoglobin Reductase in Human Tissue.

Start Date: 22 Jan 80 Est Comp Date: 11-11-82

Principal Investigator:
COL Murdo MacDonald

Facility: LAMC

Dept/Svc:
Endocrinology

Associate Investigators:
COL Louis Hagler
Robert I. Coppes, Jr., DAC

Key Words:
Metmyoglobin reductase, Myoglobin

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: None

Periodic Review Results:

Study Objective: To determine the locations of metmyoglobin reductase and relate it to myoglobin concentrations and physiological activities of the tissue.

Technical Approach: Small samples of tissue removed routinely during various operations will be obtained through the cooperation of Department of Surgery, LAMC. These samples will be assayed for myoglobin by a standard published method, [1] metmyoglobin reductase enzyme activity will be determined by a method described by Hagler et al. [2]

Progress: A few tissue samples from gynecology patients has been obtained and stored to be assayed in near future.

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: E-79-05 Status: Completed

Title: The Determination of Myoglobin & Metmyoglobin Reductase in Serum, Urine & Muscle of Healthy Volunteers & Patients with Various Muscle Disorders & the Effect of Exercise.

Start Date: 27 Nov 79 Est Comp Date: 11-11-82

Principal Investigator:
COL Murdo MacDonald

Facility: LAMC

Dep/Svc:
Endocrinology

Associate Investigators:
COL Louis Hagler
Richard I. Coppes, Jr., DAC

Key Words:
Exercise, myoglobin
Metmyoglobin reductase

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: None

Periodic Review Results:

Study Objective: To determine if exercise will cause myoglobin and metmyoglobin reductase to be released from muscle cells and appear in blood and urine and to relate this to amount of exercise and level of fitness.

Technical Approach: Volunteers will exercise on a treadmill at 60 to 80% of maximum predicted heart rate. Blood and urine samples will be collected prior to and every 30 minutes for two hours after exercising. Blood will be examined for LDH, CPK, SGOT and blood and urine will be assayed for myoglobin and metmyoglobin reductase activity by published methods. The results will be correlated to amount of exercise, and level of fitness.

Progress: Blood was obtained from five volunteers from the FORSCOM Biatholon team after a 10 K and 20 K National Championship Biatholon Race. The assays are to be carried out shortly.

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: G-80-13 Status: Ongoing

Title: The Use of Metoclopramide to Facilitate Emergent Upper Intestinal Endoscopy.

Start Date: 13 May 80 Est Comp Date: 1983

Principal Investigator: MAJ David Keisler Facility: LAMC

Dept/Svc: Gastroenterology Associate Investigators: MAJ Merle Sogge

Accumulative MEDCASE Cost: None Est Accumulative OMA Cost: $3500 Periodic Review Results:

Study Objective: To determine if metoclopramide facilitates gastric emptying as preparation for emergency upper endoscopy in patients with upper gastrointestinal hemorrhage.

Technical Approach: Either metoclopramide or normal saline will be given intravenously prior to endoscopy. The physician will be asked to assess the amount of gastric contents present during the procedure.

Progress: So far only four patients have been entered into the stud.. Twenty are needed to complete the study.

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: G-80-14 Status: Terminated

Title: Daytime Gastroesophageal Reflux: Characterization and Specific Therapy.

Start Date: 10 Jun 80 Est Comp Date: June 1, 1981

Principal Investigator: MAJ Steven Shay

Facility: LAMC

Dept/Svc: Gastroenterology

Associate Investigators: CPT William Romeo

Key Words:

Accumulative MEDCASE Cost:

Est Accumulative OMA Cost:

Periodic Review Results:

Study Objective: To characterize a group of patients within the gastroesophageal reflux population who have excessive daytime reflux. We will define the mechanism of reflux, examine the role of gastric emptying in daytime reflux, and prescribe individual, specific therapy on these bases.

Technical Approach:

Progress: Total patients entered:
a. 18 characterized
b. 8 suitable and treated with biofeedback.

Presented William Beaumont GI symposium March, 1981; abstract in print.

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: G-80-17 Status: Ongoing

Title: Study of Gastric Emptying by Use of 99^{m} Tc-Tagged Chicken Liver as a Marker of Solid Food in Patients with Reflux Esophagitis.

Start Date: 9 Sep 80 Est Comp Date: Indefinite

Principal Investigator:
MAJ Barbara Nylund

Facility: LAMC

Dept/Svc:
Gastroenterology

Associate Investigators:
MAJ Steven Shay
CPT Ruben Cuadrado

Key Words:
Gastroesophageal reflux disease, gastric emptying

Accumulative MEDCASE Cost: None	Est Accumulative Cost: $5000	Periodic Review Results:

Study Objective: Gastroesophageal reflux disease (GERD) refers to a clinical syndrome manifest by the symptom of heart burn and in some cases the sequela of peptic esophagitis, stricture, esophageal ulcer or Barrett's epithelium. Delayed gastric emptying of liquids and/or solids has been hypothesized as a mechanism which could increase the volume of gastric contents and thus contribute to the pathogenesis of gastroesophageal reflux. If this is the etiology of reflux in this subset of patients, the approach to management should be to stimulate gastric emptying in addition to neutralizing or reducing acid production.

Technical Approach: Esophageal reflux must be carefully documented and quantified by careful history taking, esophagoscopy with biopsy if necessary, esophageal manometry and 24 hour pH monitoring.

Gastric emptying will be quantified by Tc^{m99} tagged sulfur colloid chicken liver studies.

Progress: Doctors Shay and Cuadrado studied 15 subjects, of which 2 were normal controls and 6 were patients who fit all the criteria of the protocol for GERD. Of these 6, 5 had normal gastric emptying and 1 had markedly

delayed emptying. This one subject had severe acid reflux by all clinical measurements as well. Since August 1981, 13 volunteer subjects have been studied. Of this 13, 8 had histories consistent with GERD. Six had delayed emptying and 2 were normal. Of the 6, 4 had delayed emptying secondary to gastroparesis diebeticorum. Four were started on the drug metoclopramide to stimulate gastric emptying. One patient was restudied while on the drug and found to have marked improvement although still abnormal gastric emptying. symptoms, likewise, were improved. Two of the 8 have completed the remaining evaluation of pH monitoring, mobility studies and endoscopy. The remaining subjects will complete the evaluation over the next six months. Three of the 13 subjects had had prior gastric surgery and were thus disqualified.

The goal is to complete the entire evaluation on 30 subjects and 10-15 controls.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: H-78-11 Status: Completed

Title: Amikacin and Carbenicillin vs Gentamicin & Carbenicillin: A Randomized Phase III Study in the Septic Neutropenic Oncology Patient.

Start Date: Dec 78 Est Comp Date: Indefinite

Principal Investigator: Facility: LAMC
Dr. Norman Martin
Dr. David Gandara

Dept/Svc: Associate Investigators:
Hematology-Oncology

Key Words: Amikacin, Carbenicillin, Gentamycin, Neutropenia

Accumulative MEDCASE Cost: None Est Accumulative OMA Cost: None Periodic Review Results:

Study Objective: This is a randomized study to compare two combination antibiotics in the therapy of neutropenic oncology patients. This study has now been discontinued.

Technical Approach:

Progress: Data is currently being analyzed. No further patients will be added to this study.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: H-79-25 Status: Terminated

Title: In Vivo Efficacy of Frozen Platelets

Start Date: Sep 79 Est Comp Date: Completed July 1981

Principal Investigator:
LTC John Redmond, III

Facility: LAMC

Dept/Svc:
Hematology-Oncology

Associate Investigators:
LTC Robert Bolin
LTC David Gandara

Key Words: Platelets, frozen

Accumulative MEDCASE Cost:	Est Accumulative OMA Cost:	Periodic Review Results:

Study Objective: To determine the efficacy of cryopreservation of platelets using a glycerol cryopreservative.

Technical Approach: Platelets were obtained from human donors, frozen using glycerol-glucose cryopreservative, tagged with chromium and reinfused to determine recovery and platelets survival. Results were published below.

Progress: This study has now been terminated. Progress results were published in abstract in Clinical Research, Volume 29, Nr. 2, 1981. 345A.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: H-79-20 Status: Terminated

Title: The Effect of Levo-dopa on Bone Pain in Advanced Cancer of the Prostate.

Start Date: Aug 1979 Est Comp Date: N/A

Principal Investigator:
LTC John Redmond, III

Facility: LAMC

Dept/Svc:
Hematology-Oncology

Associate Investigators:
LTC Richard Watson
LTC George Deshon
LTC David Gandara

Key Words: Levo-Dopa, Bone Pain, Prosate

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost:

Periodic Review Results:

Study Objective: This study was a controlled study to determine the efficacy of Levo-dopa vs placebo in control of bone pain secondary to metastatic cancer of the prostate.

Technical Approach: Patients were randomly treated with Levo-dopa or placebo and a pain analog scale was used to determine response to treatment.

Progress: This study has been discontinued secondary to failure to accrue patients.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: H-80-34 Status: Completed

Title: Cytogenetic Studies in Preleukemic States

Start Date: 9 Dec 80 Est. Comp. Date:

Principal Investigator: LTC Jacqueline Hart Facility: LAMC

Dept/Svc: Hematology-Oncology Associate Investigators:

Accumulative MEDCASE Cost: None Est Accumulative OMA Cost: None Periodic Review Results:

Study Objective:
1. To determine multi-institutional interest in performing pretreatment cytogenetic studies on the bone marrow and blood of patients with smoldering leukemia and refractory anemia with excess blasts.

2. If sufficient patient samples were obtained, to correlate pretreatment cytogenetic data with the patient's subsequent response to Prednimustine chemotherapy, duration of response and survival.

Technical Approach: 1. This protocol was formulated around the NCOG parent protocol, 9L82, "A Phase 2 Trial of Prednimustine in Smoldering Leukemia and Refractory Anemia with Excess Blasts".

2. The NCOG headquarters was used as the hub for entry of patients onto 9L82. Institutions registering patients on this protocol were notified that pretreatment cytogenetic studies on bone marrow and peripheral blood were advisable (but not necessarily required).

3. For marrow and blood obtained on patients registered on 9L82 from the Bay Area, cytogenetics were performed at Letterman Army Medical Center using conventional techniques.

Progress: 1. H-80-34 officially opened in January of 1981.

2. Of 8 evaluable smoldering leukemia and refractory anemia with excess blast patients entered on 9L82 between January and June 1981 (the close of the 9L82 protocol), 2 had cytogenetic studies prior to treatment.

3. While accrual of patient samples was too low for analysis, interest in determination of cytogenetic studies for future protocols has grown. Sufficient interest has now been stimulated among group members to predict success of future cytogenetic studies on other protocols.

4. Protocol 9L82 and cytogenetic protocol H-80-34 were closed in June of 1981.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: H-81-38 Status: Completed

Title: Incidence of the Preleukemic Syndrome in the Hiroshima Atomic Bomb Survivors.

Start Date: 10 Mar 81 Est. Comp. Date: N/A

Principal Investigator: LTC Jacqueline Hart

Facility: LAMC

Dept/Svc: Hematology-Oncology

Associate Investigators:

Key Words: Preleukemic, Hiroshima, Atomic Bomb

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: None

Periodic Review Results:

Study Objective: To determine if in a target population of individuals exposed to ionizing irradiation, such as survivors of Hiroshima and Nagasaki, there was a subset who had preleukemia.

Technical Approach:
1. After nearly one year of negotiations with the RERF in Hiroshima, Japan, protocol H-81-38 was devised in February 1981 and forwarded for review to the RERF. Such protocol was devised to determine a number of factors inducing if, in patients followed by the RERF, there was a subgroup with preleukemia.

2. Multiple clinical correlations were considered once a satisfactory population of patients was identified for study.

Progress:
1. Dr. Jacqueline Hart and resident Dr. Aston Williams were invited guests of the RERF, Hiroshima, Japan in May 1981.

2. Protocol H-81-38 was extensively discussed with and well received by members of the staff of the RERF.

3. It was discerned that there was a group of patients being followed by the RERF that did indeed have preleukemia.

4. Work in progress on protocol H-81-38 is currently undergoing completions.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: See below Status: Ongoing

Title: All protocols currently ongoing for the National Surgical Adjuvant Breast Project, (NSABP), see below under Study Objectives for specific titles.

Start Date: Est. Comp. Date:

Principal Investigator: Facility: LAMC
LTC David Gandara
LTC John Redmond

Dept/Svc: Associate Investigators:
Hematology-Oncology

Key Words: NSABP

Accumulative MEDCASE Cost: None | Est Accumulative OMA Cost: None | Periodic Review Results:

Study Objective: H-81-42 "A Clinical Trial Comparing PF With and Without Adriamycin in Management of Primary Breast Cancer with Positive Axillary Nodes and Estrogen Receptors Negative" NSABP No. B-11

Technical Approach: This study is being performed by the National Surgical Adjuvant Breast Project, with Letterman Army Medical Center as an active participant. In this randomized study, combination chemotherapy with and without Adriamycin will be administered by the personnel of the LAMC Hematology-Oncology Clinic.

Progress: This is a newly activated study with continuing patient accrual and data to be analyzed at a future time.

Study Objective: H-81-39 "A Clinical Trial Assessing Tamoxifen in Primary Breast Cancer with Negative Axillary Nodes and Positive Estrogen Receptors", NSABP Proto. No. B-14.

Technical Approach: This is a study of the National Surgical Adjuvant Breast Project with Letterman Army Medical Center as an active participant. In this randomized trial, the impact of Tamoxifen in primary breast cancer will be assessed. Tamoxifen will be administered through the Letterman Army Medical Center Hematology-Oncology Clinic.

Progress: This is a newly activated study with ongoing patient accrual.

Study Objective: H-80-28 "A Protocol to Compare Segmental Mastectomy and Axillary Dissection with and without Radiation of the Breast and Total Mastectomy and Axillary Dissection", NSABP Prot. No. B-06

Technical Approach: This study is being performed by the National Surgical Adjuvant Breast Project with LAMC as an active participant. This is a multi-disciplinary study being conducted through General Surgery, Radiation Therapy, and the Hematology-Oncology Clinic.

Progress: This is an ongoing study with continuing active patient accrual. Future data analysis is planned and will be reported.

Study Objective: H-77-09 "A Clinical Trial to Evaluate Postoperative Immunotherapy and Postoperative Systemic Chemotherapy in the Management of Resectable Colon Cancer", NSABP Prot. No. C-01.

Technical Approach: This is a study of the National Surgical Adjuvant Breast and Bowel Project with Letterman Army Medical Center as an active participant. Combination chemotherapy and immunotherapy are administered through the LAMC Hematology-Oncology Outpatient Clinic.

Progress: This is an ongoing study with continuing active patient accrual. Future data analysis is planned and will be reported.

Study Objective: H-78-08 "A Clinical Trial to Evaluate Postoperative Radiation and Postoperative Systemic Chemotherapy in the Management of Resectable Rectal Carcinoma", NSABP Prot. No. R-01.

Technical Approach: This is a study of the National Surgical Adjuvant Breast and Bowel Project with Letterman Army Medical Center as an active participant. Radiation therapy or combination chemotherapy will be administered through the LAMC Radiation Therapy Department or Hematology-Oncology Clinic.

Progress: This is an ongoing study with continuing patient accrual. Data analysis is in progress and will be reported.

Study Objective: H-77-05 "A Protocol to Compare Combined Chemotherapy with and without Tamoxifen in the Management of Patients with Surgically Curable Breast Cancer", NSABP Prot. No. B-09.

Technical Approach: This is a study of the National Surgical Adjuvant Breast Project with Letterman Army Medical Center as an active participant. Combination chemotherapy with or without Tamoxifen are administered through the LAMC Hematology-Oncology Clinic.

Progress: This study has been closed. Data analyzed, and reported. Preliminary results were reported in the New England Journal of Medicine, Volume 305, pgs. 1-5.

Study Objective: H-81-40 "A Clinical Trial Assessing Sequential Methotrexate and 5-FU in the Management of Primary Breast Cancer With Negative Axillary Nodes and Estrogen Receptors", NSABP Prot. No. B-13.

Technical Approach: This is a study of the National Surgical Adjuvant Breast Project with Letterman Army Medical Center as an active participant. This is a randomized trial assessing the impact of combination chemotherapy and primary breast cancer with negative axillary nodes and estrogen receptors. Chemotherapy will be administered through the LAMC Hematology-Oncology Clinic.

Progress: This is a newly activated study with ongoing patient accrual.

Study Objectives: H-81-41 "A Clinical Trial Comparing PFT With and Without Adriamycin in the Management of Primary Breast Cancer with Positive Axillary Nodes and Estrogen Receptors Positive", NSABP Protocol No. B-12

Technical Approach: This is a study of the National Surgical Adjuvant Breast Project with Letterman Army Medical Center as an active participant. Adjuvant combination chemotherapy with Tamoxifen is administered in this randomized study through the personnel of the LAMC Hematology-Oncology Clinic.

Progress: This is a newly activated study with patient accrual ongoing at the present time.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: See below Status: Ongoing

Title: All protocols currently ongoing for the Northern California Oncology Group, (NCOG), see below under Study Objective for specific titles.

Start Date: Est. Comp. Date:

Principal Investigator: Facility: LAMC
LTC David Gandara
LTC John Redmond

Dept/Svc: Associate Investigators:
Hematology-Oncology

Key Words: NCOG

Accumulative MEDCASE Cost: Est Accumulative OMA Cost: Periodic Review Results:

Study Objective: H-81-37 "A Non-Randomized Trial of Combination Chemotherapy & Sequential Hemi-Body Radiation Therapy in High Tumor Burden Multiple Myeloma", Northern California Oncology Group, Prot. No. 9M91.

Technical Approach: Patients with high tumor burden multiple myeloma are treated with combination chemotherapy followed by sequential hemi-body radiation therapy followed by combination chemotherapy, consolidation therapy. Therapy consists of Vincristine, Melphalan, Cyclophosphamide, Prednisone.

Progress: Patients are being accrued into this protocol and data is currently undergoing analysis.

Study Objective: H-81-36 "A Randomized Comparison of Adjuvant vs No Adjuvant Chemotherapy in Testicular Cancer". NCOG Prot. No. 4T83JX. Ecto Prot. No. TC 279.

Technical Approach: This protocol randomly assigns patients with Stage II testicular cancer to close clinical followup vs adjuvant chemotherapy following radical lymphadenectomy.

Progress: This study is ongoing. Patients are currently being accrued and data is undergoing analysis.

Study Objective: H-81-35 "Combination Chemotherapy for Bulky or Recurrent Germinal Cell Tumors With and Without Lithium Carbonate", NCOG Prot. No. 4T82.

Technical Approach: Patients with bulky or recurrent germinal cell tumors are randomly assigned to treatment with combination chemotherapy with or without lithium carbonate to evaluate use of this drug to reduce neutropenia.

Progress: Patients are currently being accrued into this study. data is being analyzed, no results have been published.

Study Objective: H-80-33 "A Clinical Trial of Seven Drug vs. Nine Drug Chemotherapy in Extensive Disease, and a Seven Drug with Late Consolidative Radiotherapy in Limited Disease Oat Cell Lung Cancer", NCOG Prot. No. 2091.

Technical Approach: Patients with extensive oat cell carcinoma are randomly assigned to receive seven vs nine drugs in combination chemotherapy regimens. Patients with limited oat cell carcinoma are treated with a seven drug regimen with late consolidation radiotherapy.

Progress: Patients are continuing to be accrued into this study and data is continuously being analyzed. No publication has resulted from this study.

Study Objective: H-80-31 "A Clinical Trail of m-AMSA in Acute Leukemia, Refractory to Usual Methods of Treatment", NCOG Prot. No. 9L83.

Technical Approach: Patients with acute refractory leukemia were treated with induction therapy consisting of m-AMSA.

Progress: Study has been discontinued. Data is currently being analyzed. No publication has resulted at this point.

Study Objective: H-80-30 "A Study of Adriamycin -vs- Adriamycin and Cis-Platinum in Patients with Unresponsive Prostate Cancer". NCOG Prot. No. 4P81.

Technical Approach: Patients with refractory cancer of the prostate were randomly assigned and received Adriamycin vs Adriamycin and Cis-Platinum.

Progress: Patients are continuing to be accrued into this study, data is being analyzed, no publications resulted from this study.

Study Objective: H-80-27 "A Clinical Trial of Platinum, Adriamycin and Cytoxan, (PAC), Chemotherapy in the Treatment of Ovarian and Endometrial Carcinoma", NCOG Prot. No. 5081.

Technical Approach: Patients with advanced ovarian carcinoma were treated with PAC.

Progress: This study has been closed. Data is currently being analyzed; no publication has resulted.

Study Objective: H-80-26 "A Clinical Trial of m-AMSA in Metastatic or Recurrent Carcinoma of the Lung", NCOG Prot. No. 2N83

Technical Approach: Patients with advanced lung cancer were treated with m-AMSA.

Progress: This study has been terminated. Data is currently being analyzed. No publication has resulted.

Study Objective: H-79-24 "A Phase II Trial of Prednimustine in Acute ANLL over 60, Smouldering and Refractory Leukemia", NCOG Prot. No. 9L82.

Technical Approach: Patients with smouldering refractory leukemia were treated with daily Prednimustine.

Progress: This study has been closed. Data is being analyzed, and will be published at a future date.

Study Objective: H-79-23 "A Randomized Phase III Study of Radiation Therapy with or without Chemotherapy for Remission Induction & Multi-drug Chemotherapy Program for Remission Consolidation & Maintenance in Inoperable Advanced Squamous Cell Carcinoma of the Head and Neck", NCOG Prot. No. 7E61.

Technical Approach: Patients with inoperable squamous cell carcinoma of the head and neck were treated with combination chemotherapy.

Progress: This study is closed. Data is currently under analysis. No publication has resulted.

Study Objective: H-79-22 "A Phase III Study of DES -vs- DES & Adriamycin in Patients with Metastatic Prostatic Carcinoma", NCOG Prot. No. 4P82.

Technical Approach: Patients were randomly assigned and received DES vs DES and Adriamycin after diagnosis of prostate cancer.

Progress: This study has been closed. Data is currently being analyzed, no publication has resulted.

Study Objective: H-78-19 "A Phase III Study Comparing Adriamycin & 5-FU vs BCNU & Adriamycin & Ftorafur -vs- Mitomycin C & Adriamycin & Ftorafur for Patients with Disseminated Gastric Cancer", NCOG Prot. No. 3S62.

Technical Approach: Patients were randomized between the two therapy arms.

Progress: Patients are continuing to be accrued into this study, data is being analyzed, no publication has resulted.

Study Objective: H-78-18 "A Randomized Phase II Trial of Cis-Platinum, Adriamycin & Cytoxan vs Cis-Platinum in Metastatic Transitional Cell Carcinoma of Urinary Bladder", NCOG Prot. No. 4881.

Technical Approach: Patients were randomly assigned to one of the therapy arms above.

Progress: This study is closed. Data is currently being analyzed, no publication has resulted.

Study Objective: H-78-17 "A Phase III Trial of Two Combination Chemotherapy Regimens (POCC vs VAM/POCC) in Combination with Radiotherapy for Undifferentiated Small Cell Anaplastic Lung Cancer (Oat Cell)."

Technical Approach: Patients were randomized between the two treatment arms above.

Progress: Data is currently being analyzed. No patients are being accrued. This study is closed. There has been no publication.

Study Objective: H-78-16 "Phase III Study of Radiotherapy plus Hydroxyurea & BCNU -vs- Radiotherapy plus Hydroxyurea & Procarbazine, CCNU, Vincristine (PCV) for the Treatment of Primary Brain Tumor", NCOG Prot. No. 6G6.

Technical Approach: Patients were randomized between the two treatment arms.

Progress: This study is ongoing, patients are being accrued, no publication has resulted.

Study Objective: H-79-15 "Conventional Radiotherapy & Heavy Charged Particle Radiotherapy in the Treatment of Local & Regional Adenocarcinoma of the Pancreas", NCOG Prot. No. 3P81.

Technical Approach: Patients with local and regionally advanced adenocarcinoma of the pancreas are treated with heavy charged particle following surgery.

Progress: This study is ongoing, patients are continuing to be accrued, no publication has resulted.

Study Objective: H-79-13 "Phase III Study Comparing Adriamycin Plus 5-FU - vs-BCNU Plus Adriamycin Plus Ftorafur for Patients with Disseminated Pancreatic Cancer", NCOG Prot. No. 3P62.

Technical Approach: Patients are randomized between the two treatment arms.

Progress: This study is closed. Data is currently being analyzed, no publication has resulted.

Detail Summary Sheet

Date: 1 Oct 81 Prot.No.: N-81-10 Status: Ongoing

Title: Protocol Study for Treatment of Acute Inflammatory Polyradiculoneuropathy with Plasmapheresis.

Start Date: 12 May 81 Est. Comp. Date: Indefinite

Principal Investigator: CPT Patrick Hogan

Facility: LAMC

Dept/Svc: Neurology

Associate Investigators:

Key Words: Polyradiculopathy, Plasmapheresis

Accumulative MEDCASE Cost: 1500.00

Est Accumulative OMA Cost: None

Periodic Review Results:

Study Objective: The objectives of the study are to assess the benefits of plasmapheresis to patients with acute inflammatory polyradiculoneuropathy.

Technical Approach: After a patient is found to be a suitable candidate for treatment, five courses of plasmapheresis are done using plasmanate replacement. Before, during, and after the treatments, the patient's clinical exam and symptoms are reviewed and recorded.

Progress: One patient has been officially entered in the protocol. The full five courses of plasmapheresis were done without complication. Remarkable symptomatic and objective improvement occurred much more quickly than could have occurred through any variation in the natural history of the disease.

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: Ns-80-01 Status: Completed

Title: A Comparative Study of Two Peripheral IV Site Dressing Methods: A Traditional Gauze and Antibiotic Ointment Method vs Polyurethane Dressing Method.

Start Date: 12 Aug 80 Est Comp Date: May 1981

Principal Investigator:
CPT Betty Jones

Facility: LAMC

Dept/Svc:
Nursing Service

Associate Investigators:
CPT Dina Norton
Dr. Fred Stark

Key Words: Peripheral IV. Dressing, Polyurethane

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: None

Periodic Review Results:

Study Objective: To show that there is no difference in complication rates between peripheral IV sites dressed with a traditional gauze and antimicrobial ointment method versus a polyurethane dressing method.

Technical Approach: The incidence of IV complications using the two methods of IV site dressings was observed in a prospective study using a random sample.

Progress: The study was completed and terminated in May 1981. It has been presented at the following:

Phyllis J. Veronick Nursing Research Symposium
Ft. Sam Houston, TX

8th Annual Workshop on Hospital Associated Infections, APG, Md.

An article titled, "Polyurethane Dressing: An Alternative Approach", is currently being reviewed by NURSING 81.

Date: 1 Oct 81 Prot No.: OB-78-01 Status: Ongoing

Title: Large Animal Surgery: An Important Addition to Residency Training in Obstetrics & Gynecology

Start Date: Aug 1978 Est Comp Date: OB-78-01

Principal Investigator: LTC Craig Winkel

Facility: LAMC

Dept/Svc: Obstetrics/Gynecology

Associate Investigators: N/A

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: $2,000

Periodic Review Results:

Study Objective: The purpose of this project is to augment residency education in Obstetrics & Gynecology by providing hands on experience in bowel, genitourinary tract, and vascular surgery. The project is set up in a fashion to allow junior residents an opportunity to learn surgical techniques, develop proficiency in instrument handling, and develop self confidence while doing surgery under a no-pressure situation.

Technical Approach: At the present time the residents are doing surgery on laboratory dogs. The techniques taught include small-bowel resection and reanastomosis. Large bowel resection and reanastomosis of ureters and repair of vena caval injuries.

Progress: The project is ongoing. We hope to expand this program to provide experience for other surgical residency programs.

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: OB-80-11 Status: Ongoing

Title: The Role of Extra-adrenal 21-hydroxylation of Plasma Progesterone as a Source of Deoxycorticosterone (DOC) in the Development of Hypertension in Pregnant and Nonpregnant Subjects: Establishment of an Animal Model.

Start Date: 14 Oct 80 Est Comp Date: July 1982

Principal Investigator: LTC Craig Winkel

Facility: LAMC

Dept/Svc: Obstetrics/Gynecology

Associate Investigators: None

Key Words: Deoxycorticosterone, Pregnant, hypertension, animal model

Accumulative MEDCASE Cost: $21,000

Est Accumulative OMA Cost: $4000

Periodic Review Results:

Study Objective: The extraadrenal formation of deoxycorticosterone (DOC) from circulating progesterone has been demonstrated in pregnant and nonpregnant women, adrenalectomized women, and men. To study the role of extraadrenal 21-hydroxylase activity in the development of pregnancy-induced hypertension it is necessary to have an animal model. The objective of this study is to determine if extraadrenal DOC formation from progesterone will lead to the development of hypertension in the rabbit.

Technical Approach: Rabbits are anesthetized and have arterial catheters placed in the femoral artery. Blood pressure is recorded daily. Progesterone is given by I.M. injection. Serum progesterone and DOC are determined by RIA.

Progress: Study ongoing, no data to report at present.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: OB-81-12 Status: Ongoing

Title: Cervical Ripening by Breast Stimulation

Start Date: 9 Jun 81 Est Comp Date: April 1982

Principal Investigator: LTC John Elliott

Facility: LAMC

Dept/Svc: Obstetrics/Gynecology

Associate Investigators: James F. Flaherty, D.O.

Key Words: Cervix, breast, stimulation

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: None

Periodic Review Results:

Study Objective: To determine if oxytocin release by breast stimulation can "ripen" the cervix in obstetrical patients who are at term.

Technical Approach: Patients are randomized into two groups - a control group and a treatment group. The treatment group stimulates their breasts for 3 hours a day for 3 days and the control group avoids all stimulation of their breasts. A separate obstetrician assigns a Bishop score at each examination. The change in Bishop score is analyzed as is the number of patients going into labor during the trial.

Progress: Preliminary data have been examined with 19 patients in the control group and 22 in the treatment group. Gestational age and mean initial Bishop scores are similar for both groups. One patient in the control group went into labor compared to 11 in the treatment group p .05. The mean change in Bishop score in the treatment group was 2.8 + 0.9 (mean + S.D.) compared to 0.7 + 0.9 (mean + S.D.) in the control goup (Sig p .01). More patients need to be added to the study.

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: OB-81-14 Status: Ongoing

Title: Evaluation of Serum Cefoxitin Levels After Either Uterine Irrigation or IV Infusion at Time of Cesarean Section.

Start Date: 14 Jul 81 Est Comp Date: 30 Nov 81

Principal Investigator: LTC John Elliott

Facility: LAMC

Dept/Svc: Obstetrics/Gynecology

Associate Investigators: James F. Flaherty, D.O.

Key Words: Cefoxitin, Cesarean Section, Irrigation

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: $2000

Periodic Review Results:

Study Objective: To determine the mechanism of action of uterine irrigation with antibiotics at the time of cesarean section.

Technical Approach: Serum samples were obtained after uterine irrigation or IV infusion of cefoxitin at cesarean section. Baseline, 5", 10", 15", 30", 1 hr, 2 hrs, 4 hrs and 8 hr samples were drawn. Urine aliquots were also obtained at those intervals.

Progress: All blood samples have been drawn and will be analyzed soon for cefoxitin levels.

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: OB-81-15 Status: Ongoing

Title: A Comparison of In Vivo Tissue Levels of Cefoxitin Following IM Injection and Post Surgical Irrigation in the Guinea Pig Genital Tract.

Start Date: 18 Aug 81 Est Comp Date: July 1982

Principal Investigator:
CPT Evert Oortman

Facility: LAMC

Dept/Svc:
Obstetrics/Gynecology

Associate Investigators:
John P. Elliott, LTC, MC
Craig A. Winkel, LTC, MC

Key Words:

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: $4000

Periodic Review Results:

Study Objective:
To detemine mode of action of irrigation of uterus with Cefoxitin at time of Cesarean section to prevent post-operative infection.

Technical Approach:
After irrigation of uterus and/or IV infusion with cefoxitin serum and uterine tissue levels of cefoxitin will be determined.

Progress: Because of lag time between submission of protocol and approval by Animal Use Committee, start date will begin after 1 January 1982.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: PhM-81-02 Status: Ongoing

Title: Tinel's sign over the median nerve at the wrist in asymptomatic hands.

Start Date: 13 Jan 81 Est. Comp. Date: March 1982

Principal Investigators:
CPT Nicholas Pinilla

Facility:
LAMC

Dept/Svc:
Physical Medicine and Rehab

Associate Investigators:
None

Key Words:

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: None

Periodic Review Results:

Study Objective: To determine the incidence of Tinel's sign over the median nerve at the wrist in patients with asymptomatic hands. To collect a population with carpal tunnel syndrome and compare both groups as to the incidence of Tinel's sign.

Technical Approach: Each patient will be examined by this investigator and an attempt to elicit Tinel's sign will be made over the median nerve at the wrist bilaterally by releasing the rubber end of a standard neurological hammer from a height of 8 cms. The area of impact will encompass the distal wrist crease of the patient and extending distally six cms which is the normal extent of the transverse carpal ligament.

Progress: A total of 100 consecutive patients were collected, 3 of which were eliminated from the sample because of generalized neuropathy. Of the remaining sample 97 patients (194 hands), 169 hands were considered asymptomatic. Of this group of asymptomatic hands, only 10 hands were considered to be positive for Tinel's sign. Of the original sample of 194 hands, 21 were considered to have carpal tunnel syndrome, many of which were confirmed by nerve conduction studies. Twenty hands of this group had a positive Tinel's sign.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: PhM-81-03 Status: Ongoing

Title: Validation of Nonroentgenographic Methods for Measuring Q-angle of the Knee.

Start Date: 18 Aug 81 Est. Comp. Date: July 1981

Principal Investigators:
CPT Mary Bong

Facility:
LAMC

Dept/Svc:
Physical Medicine

Associate Investigators:
N/A

Key Words: Q-angle, measurement, validity, patellofemoral dysfunction

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: None

Periodic Review Results:

Study Objective:
1. Determine if the Q-angle of the knee as measured by each of two nonroentgenographic methods differs from the Q-angle measured on a roentgenograph; and if a difference is found, to define a more valid measurement method.

2. Determine if there is a change in Q-angle with quadriceps activity in individual subjects.

3. Determine if the investigator's measurements are reliable.

Technical Approach: The quadriceps angle of 35 adult male subjects was measured by two nonroentgenographic methods and compared with measurements obtained from roentgenographs of each subject's lower extremity. Q-angle was measured with the quadriceps muscle in both the relaxed and contracted state for all three measurement methods. Each subject and each roentgenograph was measured on two separate occasions.

Progress: All data collection has been completed. Statistical analysis of results is being performed, and a draft of the final report is being prepared.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: Peds-81-01 Status: Completed

Title: Model for Neonatal Intubation and Thoracostomy

Start Date: 14 Jul 81 Est. Comp. Date: yearly

Principal Investigators:
LTC Howard Kilbride

Facility:
LAMC

Dept/Svc: Pediatrics

Associate Investigators:
Craig A. Winkel, LTC, MC

Key Words: Neonatal, intubation, thoracostomy

Accumulative MEDCASE Cost:

Est Accumulative OMA Cost: $1000

Periodic Review Results:

Study Objective: To provide a live model for neonatal intubation and thoracostomy for teaching these procedures to pediatricians, obstetricians, anesthesiologists and nursing personnel.

Technical Approach: Using ketamine anesthesia, cats are used for practice placing endotracheal tubes and thoracostomy tubes.

Progress: Laboratory sessions were held on 12 and 16 Nov 1981. Thus, project was completed giving neonatal intubation practice to personnel from Pediatrics, Obstetrics, Anesthesia and Nursing.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: P-79-03 Status: Completed

Title: Life Change, Social Support Groups, & Illness Behavior in Patients with Chronic Airway Obstruction (CAO).

Start Date: 23 Oct 79 Est. Comp. Date: N/A

Principal Investigators:
CPT Peter Jensen

Facility:
LAMC

Dept/Svc:
Psychiatry

Associate Investigators:

Key Words: Social Supports, Life change, stress, CAO, chronic airway obstruction, chronic obstructive pulmonary disease (COPD)

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: $3000

Periodic Review Results:

Study Objective: To test 2 hypotheses:

1. Patients with CAO who are under high stress and life change, (as measured by Holmes' and Rakes' Schedule of Recent Experiences) and have few social supports (as measured by Laborsky's Social Assets Scale), are at greatly increased risk for hospitalization and morbidity, as compared with patients with nl. life change and/or nl. social supports with comparable severity of CAO.

2. "At risk" patients with CAO, high life change, and few social supports can be helped by strengthening their social supports thru engaging them in a twice monthly support group. This will decrease their hospitalization rate, and decrease morbidity.

Technical Approach: Pulmonary Clinic patients at LAMC were invited to participate in the study, if they had the diagnosis of CAO, (60 patients agreed to participate). All patients in study were administered the Holme's and Rake's SRE to determine their LCU score; all patients were administered Luborsky's SAS. (N = 30). One half of patients with the highest LCU scores and lowest SAS scores, defined as the "at risk" group, were divided into 2 treatment groups (N = 10 in each group) and 1 control group (N = 10), and followed for 6 months. The treatment groups were compared at the end of the 6 months with the control group for mean number of hospital days, total

number of hospitalizations, and mean number of ER visits. Also, the control group (N = 10) "at risk" was compared with the "not at risk" patients (with nl. SAS or LCU scores) for hospital days, and ER visits at the end of 6 months.

Progress: Study has been completed, except for final analysis of the data.

Results: 1) Two treatment groups had significantly fewer hospitalizations and mean hospital days than the control group. $p < .05$.

2) The "at risk" control group had significantly more hospitalizations and mean hospitalized days than the "not at risk" group. $p < .01$.

Further results pending final analysis of data.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: P-80-07 Status: Ongoing

Title: Depression in Childhood-An Exploratory Study.

Start Date: May 1980 Est. Comp. Date:

Principal Investigators:
Ronel Lewis, LTC, MC
C, Child Psychiatry

Facility: LAMC

Dept/Svc:
Psychiatry

Associate Investigators:
Irving Philips, M.D.
Delmont Morrison, Ph.D.
Steven Friedlander, Ph.D.
(Langley Porter Psychiatric Institute)

Key Words:

Accumulative MEDCASE Cost;

Est Accumulative OMA Cost:

Periodic Review Results:

Study Objective: To collect and evaluate a contract population to compare to a clinically symptomatic population.

Technical Approach: Independent evaluation by questionnaire (scales) of parents and child.

Progress: No progress to report for Fiscal Year 1981.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: P-80-08 Status: Ongoing

Title: Childhood Psychosis: An Analysis of Critical Events in Early Development.

Start Date: Oct 1980 Est. Comp. Date:

Principal Investigators: Facility: LAMC & Langley Porter Psychiatric Institute
Joseph B. Green M.D.
Ronel Lewis, LTC, MC
John Bebelaar, D.S.W.
Barbara Levin, M.S.W.

Dept/Svc
Psychiatry

Associate Investigators:

Key Words:

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: None

Periodic Review Results:

Study Objective: The goal of this project is to identify critical events in the perinatal period and early life of children who are diagnosed as suffering from a psychotic disorder of childhood.

Technical Approach: It is hoped that an identification of contributing social and psychological factors to the development of these disorders may facilitate preventive intervention and definitive or ameliorative treatment.

Progress: No progress to report for the Fiscal Year 1981.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: P-81-09 Status: Ongoing

Title: Childhood Depression in a Tri-Service Population

Start Date: 12 May 1981 Est. Comp. Date: Indefinite

Principal Investigators: CPT Peter Jensen

Facility: LAMC

Dept/Svc: Psychiatry

Associate Investigators:

Key Words: Childhood depression, father absence

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: $1000

Periodic Review Results:

Study Objective: 1. To determine the effects of father absence, due to military assignments, (comparing Army, Navy, and Coast Guard populations) on children, using various questionnaires designed to measure depression in children.

2. To determine the effects and/or correlation of depression and high life changes in parents with high depression scores in their children.

Technical Approach: Invitations to participate in the study were sent to 110 parents whose children attend Hamilton School; 25 families agreed to participate in the study. Each father and mother fill out independently the following tests: 1) Beck Depression Inventory, 2) Child Behavior Checklist, 3) Coddington's Life Change Scale for Children. Each child completes: 1) Childhood Depression Inventory, 2) KASTAN (test to measure certain internal, stable, and global self-attributions) and 3) IAR (test designed to measure child's attributions of responsibility for school success and failure. Also, parents completed a questionnaire measuring the number and length of father absences from home over the last 12 months.

Progress: Twenty-five families (parents) have completed all of the above questionnaires, as well as 33 children (some families have 2 children participating). Prior to further testing and data collection, a preliminary computer analysis will be done on the data collected thus far (correlation matrix).

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: NuM-74-03 Status: Ongoing

Title: Clinical Evaluation of Renal Cortical Imaging Utilizing ^{99m}Tc-Kidney Scintigraphin (2,3-dimercapto succinic acid).

Start Date: May 1974 Est Comp Date: Indefinite

Principal Investigator:
COL Robert Lull

Facility: LAMC

Dept/Svc:
Nuclear Medicine

Associate Investigators:

Key Words:
99m Tc-DMSA, Renal Cortical Imaging Agent

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: $1000

Periodic Review Results:

Study Objective: To determine the usefulness of 99m Tc-Kidney Scintigraphin in studying renal blood flow and renal anatomy.

Technical Approach: A series of adult patients who require renal radionuclide studies for diagnostic purposes will be studied in detail and compared with our standard renal agents. Approximately 5 mCi of 99m Tc-DMSA is injected intravenously with rapid images of the kidneys obtained with a scintillation camera during the first 30 seconds following the injection. Static images will then be obtained over the kidneys for the next 15 to 30 minutes to quantitatively evaluate early renal uptake of radionuclide and to determine its usefulness as a fast renal imaging agent.

Progress: No patients were entered into this study during the time frame 1 Oct 80 to 30 Sep 81. Although this protocol is temporarily inactive, we wish to continue to have it available and anticipate possible use of this agent in the future for further evaluation.

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: NuM-73-04 Status: Ongoing

Title: Clinical Evaluation of Cisternography Utilizing 111 Indium DTPA (Diethylene Triamine Pentacetic Acid).

Start Date: Aug 1973 Est Comp Date: Indefinite

Principal Investigator: COL Robert Lull

Facility: LAMC

Dept/Svc: Nuclear Medicine

Associate Investigators:

Key Words: 111-In DTPA, Cisternography Imaging Agent, Diethylene Triamine Pentacetic Acid.

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: $1000

Periodic Review Results:

Study Objective: Since there is presently a moratorium on the use of RISA in cisternography, it is our purpose to substitute 111-In DTPA for RISA in this procedure.

Technical Approach: Approximately 0.5 mCi to 2 mCi of 111-In DTPA is administered by intrathecal or intraventricular injection. The patient is then referred to Nuclear Medicine laboratory for scintigraphic evaluation of cerebral spinal fluid pathways.

Progress: 10 patients were administered 111-In DTPA during FY 81. All of these studies provided valuable information and contributed towards evaluation of cerebral spinal fluid circulation. There were no adverse effects noted and the study will be continued in FY 82.

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: NuM-78-05 Status: Ongoing

Title: Intravenous Administration of 131 I-6-B Iodo Methylnorcholesterol (NP-59) for Adrenal Evaluation and Imaging.

Start Date: Mar 1978 Est Comp Date: Indefinite

Principal Investigator:
COL Robert Lull

Facility: LAMC

Dept/Svc:
Nuclear Medicine

Associate Investigators:
LTC Douglas Van Nostrand, WRAMC
LTC Tommy J. Brown, WBAMC
LTC Peter W. Blue, FAMC
LTC Robert J. Telepak, BAMC

Key Words:
NP-59, Adrenal Imaging Agent

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: $1000

Periodic Review Results:

Study Objective: Clinical evaluation of NP-59 as a diagnostic agent for the detection of adrenal-cortical disorders and as a potential scanning agent for detecting structural abnormalities of the adrenal medulla.

Technical Approach: NP-59 is administered by slow intravenous injection with a dose of 1-2 mCi in adults, 15 uCi/kg in children except when benefit to risk ratio warrants a higher dose. Lugol's solution, 5 drops twice daily, starting 1 day before injection and continuing for two weeks, is used to block the thyroid uptake of the radionuclide. Images are obtained on approximately the 4th, 7th, and 11th days after injection using the scintillation camera and the on-line microcomputer to assess organ distribution kinetics of this agent.

Progress:

1. Number of subjects for whom conclusions were reached - (4).

2. Conditions treated. NP-59 is a radiopharmaceutical considered useful in the diagnosis of certain disease states of the adrenal gland.

3. Dosages employed. A maximum of 2 mc of NP-59 is administered intravenously to each patient.

4. Schedule of drug administration. (N/A).

5. Relevant clinical observations. Accumulation of NP-59 in normal adrenals allows imaging to begin at approximately day 3 post injection with useful images obtained as far out as 2 weeks. This agent seems to be useful in diagnosing bilateral hyperplasia, localizing adrenal remnants post adrenalectomy, and may be useful in identifying unilateral adrenal adenomas.

6. Laboratory tests performed and results. (N/A).

7. Useful results obtained. NP-59 has provided useful information concerning the evaluation and diagnosis of adrenal disease.

8. Opinion as to whether useful effects are attributed to the drug. (N/A).

9. Any new data from on-going animal studies. (N/A).

There were no reported adverse reactions to the drug and acceptable static images of the adrenal glands were obtained in all cases.

Conclusion: Further patient studies will have to be performed for adequate evaluation of this imaging technique for detecting adrenal abnormalities.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: NuM-79-07 Status: Ongoing

Title: Comparative Sensitivity of Tomographic & Planar Scintigraphy in Myocardial Perfusion and Small Organ Imaging.

Start Date: 25 Sep 79 Est. Comp. Date: Indefinite

Principal Investigators: COL Robert Lull Facility: LAMC

Dept/Svc: Nuclear Medicine Associate Investigators:

Key Words: Tomographic, Planar, Scintigraphy, Myocardial, Imaging

Accumulative MEDCASE Cost: None	Est Accumulative OMA Cost: $2000	Periodic Review Results:

Study Objective: This protocol is designed to evaluate the relative sensitivity and specificity of standard planar imaging techniques vs tomographic reconstructed imaging using the seven-pinhole colimator method of limited angle tomography in evaluating Thallium-201 distribution as a marker of myocardial regional perfusion as well as for other organ imaging studies.

Technical Approach: Patients are eligible for this study only after the referring physician has requested that standard imaging procedure for clinical indications. Those who enter the study have tomographic images obtained after routine planar views are completed. This requires increased imaging time - but does not result in any increase in radiation exposure or in any increased risk to the patient. Both the planar and tomographic images are then interpreted and evaluated against all relevant clinical data and catheterization results for determination of sensitivity and specificity.

Progress: To date, our studies indicate increased sensitivity but decreased specificity of tomographic images compared to planar images of myocardial perfusion. These preliminary data agree with the recent report from a multi-center cooperative study comparing these techniques. No non-cardiac studies have been performed. Current progress is at a standstill because changes in the clinic's computer operating software are no longer compatible with the original tomographic software. New software is being sought to allow resumption of the study in the future.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: NuM-79-09 Status: Ongoing

Title: The Natural History of the Technetium ^{99m}Tc Bone scan After Elective Joint Replacement.

Start Date: 23 Oct 79 Est. Comp. Date: Indefinite

Principal Investigators: COL Robert Lull Facility: LAMC

Dept/Svc: Nuclear Medicine Associate Investigators:

Key Words: Technetium ^{99m}, Bone Scan, Joint Replacement

Accumulative MEDCASE Cost: None	Est Accumulative OMA Cost: $2000	Periodic Review Results:

Study Objective: This study will evaluate the bone scan changes seen after joint replacement by a prospective longitudinal approach in order to establish the findings that should be expected in asymptomatic patients. This information on the range of scan abnormalities that occur in uncomplicated joint replacement is vital to determine optimal study times for accurate interpretation of scan findings when complications, such as loosening, are clinically suspected.

Technical Approach: Patients undergoing elective joint replacement are eligible to enter this protocol. Radionuclide bone scans are performed at postop times of 3, 6, 12, 24, 36, and 48 months. Scan images are evalutaed for increased radionuclide uptake in regions surrounding the joint prosthesis and anatomic areas are graded quantitatively on a 4 point scale (0 = no increased bone activity; 3+ = maximum increased activity) for quantitation. Population statistics will be applied to define expected population parameters at each time interval.

Progress: Although no patients have been entered into this prospective protocol study to date, retrospective evaluation of 85 asymptomatic patients studied at various time intervals as part of their routine orthopaedic postop evaluation has been completed. This established the normal progression of bone scan changes after total hip replacement in a retrospective manner and demonstrates the need for sequential bone scans to evaluate complications of surgery as distinct from normal postop changes. The retrospective data will

be presented and published. With completion of this retrospective analysis, the prospective study will be initiated in February 1982. The study was also delayed by a change of principal investigator.

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: NuM-79-10 Status: Terminated

Title: Gray Scale Ultrasound of the Uterus in the Puerperium: Normal & Abnormal Appearance.

Start Date: 27 Nov 79 Est Comp Date: Terminated

Principal Investigator:
MAJ Stephen Bunker

Facility: LAMC

Dept/Svc:
Nuclear Medicine

Associate Investigators:
Sankaran Babu, LTC, MC
Frank Brown, CPT, MC

Key Words: Ultrasound, Uterus, Puerperium

Accumulative MEDCASE COST: None

Est Accumulative OMA Cost: None

Periodic Review Results:

Study Objective: Post-partum involution patterns of uterus in normal and disease states.

Technical Approach: Gray scale ultrasound examinations performed twice during immediate 72 hour post-partum period and at 6 week follow-up time.

Progress: This project was terminated due to lack of interdepartment support.

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: NuM-80-12 Status: Ongoing

Title: Technetium Tc 99^{m} Disofenin Kit for Hepatobiliary Imaging. IND#16580.

Start Date: 9 Dec 80 Est Comp Date: January 1985

Principal Investigator:
COL Robert Lull

Facility: LAMC

Dept/Svc:
Nuclear Medicine

Associate Investigators:
MAJ Brown
MAJ McAuley
CPT Bunker
CPT Jackson

Key Words:
Disofenin, Hepatobiliary Imaging

Accumulative MEDCASE Cost: None	Est Accumulative OMA Cost: $1000	Periodic Review Results:

Study Objective: The data submitted will be used by New England Nuclear Corporation in preparing and filing a new drug application (NDA) with US Food & Drug Administration (FDA). Therefore, the purpose of this Phase III study is to objectively demonstrate to the FDA the diagnostic utility and safety of Tc 99m Disofenin Kit for hepatobiliary imaging. This new radiopharmaceutical agent is currently distributed as an investigational new drug.

Technical Approach: Following preparation, Tc 99m Disofenin will be administered intravenously. Imaging of the liver and gallbladder will begin at once using scintillation camera. Initially, views will be obtained every 5 minutes post injection for the first 60 to 90 minutes, with additional views at 60 minutes, 2 to 6 hours, and 24 hours if obstruction is suspected.

Progress: Although no LAMC patients were administered Tc 99m Disofenin during 1 October 80 through 30 September 81, it is anticipated that this project will be initiated during FY 82.

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: NuM-81-13 Status: Ongoing

Title: MPI-PIPIDA, Phase III Patient Study

Start Date: 1 Sep 81 Est Comp Date: 2 year period

Principal Investigator:
MAJ Joseph Theochung

Facility:
Silas B. Hays Army Community Hospital
Ft. Ord, CA

Dept/Svc:
Nuclear Medicine

Associate Investigators:
N/A

Key Words:
N-(p-isopropyl acetanilide) - iminodiacetic acid (PIPIDA)
N-(2,6 dimethyl acetanilide) - iminodiacetic acid (HIDA)
N-(2,6 diethyl acetanilide) - iminodiacetic acid (diethyl-IDA)

Accumulative MEDCASE Cost: $1,000

Est Accumulative OMA Cost: $1,000

Periodic Review Results: N/A

Study Objective: Data obtained from this Phase III study will be submitted to MEDI-PHYSICS, Inc. and subsequently will be used as objective supportive evidence of the clinical safety and utility in the evaluation of hepatobiliary system pathophysiology. The other iminodiacetic acid analogs have proved to be clinically advantageous in the diagnosis of hepatobiliary problems, such as, cholecystitis and biliary obstruction.

Technical Approach: Patient population will consist of active duty, retired and appropriate dependent personnel with suspected hepatobiliary system problem. Females should not be pregnant or lactating; and patients under 29 years of age will not be studied, unless in these both conditions the benefit to be gained outweighs the potential risk to the patient. A consent will be obtained from the patient or guardian. Patient expected to fast 6-8 hours prior to study. The average dose for 70 Kg patient: 2-5 millicuries Technetium 99m Iprofenin IV; appropriate dose adjustment will be made for different body weights. Sequential imaging will be performed of the liver region at 5 minutes interval for 60 minutes with additional views at 2-6 hours and probably also, 24 hours if clinical judgment warrants. If the gallbladder does not visualize by 1-2 hours, cholecystokinin sincalide or fatty meal may be given. Study efficacy will be determined by evaluation of the image quality and correlation of image interpretation with the results of

other standard diagnostic techniques. For each patient clinical case report will be completed.

Progress: No progress to report at this time. Still awaiting approval from TSG HURO.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: AN-80-05 Status: Completed

Title: Plasma Catecholamine Changes After Pancuronium or Metacurine Administration in Man.

Start Date: Feb 1980 Est. Comp. Date: Completed

Principal Investigator: Sheryl J. Bartel, M.D. Facility: LAMC

Dept/Svc: Anesthesia Associate Investigators: Allan L. Ross, M.D.

Key Words: Catecholamine response, Pancuronium, Metocurine

Accumulative MEDCASE Cost: $15,000 Est Accumulative OMA Cost: $5000 Periodic Review Results:

Study Objective: To determine the direction and magnitude of changes in catecholamine production and cardiovascular changes in patients undergoing surgery when the muscle relaxants pancuronium or metocurine are added to anesthetic techniques of fentanyl or halothane and oxygen.

Technical Approach:

Patients presenting for elective surgical procedures who are eligible for study are assigned alternately to group I, II, III or IV study group and are administered muscle relaxant drugs per protocol.

Progress: Catecholamine levels, heart rate, and blood pressure changes were studied in 35 ASA Class I patients. Catecholamine levels, heart rate and blood pressure were obtained after intravenous administration of pancuronium (0.07 mg/kg) or metocurine (0.28 mg/kg) and compared with baseline values in patients who had received fentanyl (25 mcg/kg) or halothane at 0.5% end tidal. Plasma samples were assayed radioenzymatically for norephinephrine, epinephrine and dopamine. Plasma norepinephrine and epinephrine levels were elevated significantly in patients receiving metocurine and anesthetized with fentanyl. Plasma norephinephrine levels were significantly decreased in patients receiving pancuronium and anesthetized with Halothane. Significant increases in heart rate and blood pressure were seen in both

groups that received pancuronium. No significant hemodynamic changes were seen after metocurine administration except a significant increase in heart rate in the group of patients anesthetized with fentanyl. From this date the authors conclude that pancuronium does not increase plasma norephinephrine, epinephrine or dopamine levels following fentanyl-oxygen or halothane-oxygen anesthesia in man, suggesting that the observed hemodynamic changes were due to the vagolytic effects of pancuronium. Additionally metocurine may cause increases in plasma norephinephrine and epinephrine although additional study will be needed to clarify these results.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: OPH-78-01 Status: Ongoing

Title: Investigative Plan for FDA Regulations for Intraocular Lens Implantation

Start Date: Mar 1978 Est. Comp. Date: Indefinite; depends on FDA

Principal Investigators:
COL Leon Metz
COL Stephen Jackson

Facility:
LAMC

Dept/Svc: Ophthalmology

Associate Investigators:
CPT Kennethy Y. Gleitsmann
CPT Robert G. Smith

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: None

Periodic Review Results:

Study Objective: The objectives of the FDA study remain similar to those stated in the original protocol. It should be added, however, that a key objective of our participation is to be able to provide these lenses for patients in whom this method of optical correction confers visual advantages, such as reduction of distortion and aniseikona.

Technical Approach: The lenses are placed in the eye after either intra- or extracapsular cataract extraction. Their fixation and placement vary with the particular lens type selected.

Progress: From 1 July 1980 to 30 June 1981, 41 IOL's have been placed. No major complications have occurred during this period.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: OPH-79-02 Status: Ongoing

Title: Vitreous Fluorophotometry in Adult Onset Diabetes Mellitus & Hyperglycemia.

Start Date: Feb 1979 Est. Comp. Date: Indefinite

Principal Investigators: COL Howard Cohen

Facility: LAMC

Dept/Svc: Ophthalmology

Associate Investigators:

Key Words: Vitreous, Fluorophotometery, Adult Diabetes Mellitus, Hyperglycemia

Accumulative MEDCASE Cost: $10,000

Est Accumulative OMA Cost: None

Periodic Review Results:

Study Objective: To measure vitreous fluroscein in adult onset diabetics and correlate the findings with the duration of disease and control.

Technical Approach: The initial standardization of the equipment presents the most difficulties as each fluorophotometer requires separate standardization.

Progress: Difficulties with obtaining respectable results have never been resolved. Attempts by company representatives and local bioengineers have been unsuccessful. In the past year this problem has become apparent in several centers. Locally University of California Department of Ophthalmology had similar problems. These were never resolved. In the past year a new machine has been marketed which is prestandardized and avoids the problems which occur in machines built from components.

During the testing phase, numerous papers have been published duplicating the original project. An attempt is now being made to utilize the instrument for anterior segment problems. As the concentration of dye will be higher and the area of focus smaller, standardization may be accomplished. If this occurs, a new protocol will be submitted.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: Ortho-81-03 Status: Ongoing

Title: 67 Gallium and 99^m Technetium Bone Imaging in Experimental Osteomyelitis.

Start Date: 10 Feb 81 Est. Comp. Date: 1 Apr 82

Principal Investigators:
CPT Michael LaGrone

Facility:
LAMC

Dept/Svc:
Orthopaedics

Associate Investigators:
MAJ Robert McAuley
COL Robert Lull
Department of Nuclear Medicine

Key Words: Osteomyelitis, Nuclear imaging

Accumulative MEDCASE Cost: $2666.00

Est Accumulative OMA Cost: $2000

Periodic Review Results:

Study Objective: To demonstrate effectivness of ^{67}Gallium versus 99^m Technetium in the early detection of Staphylococcus osteomyelitis.

Technical Approach:
1. Induction of Staphylococcal osteomyelitis in one proximal tibia in each of 32 female New Zealand rabbits. Two rabbits serve as controls.

2. Nuclear imaging sequentially with 67 Gallium: ^{99m} Technetium as described in protocol.

3. Both tibia of each rabbit removed and studied histologically.

4. Analysis of nuclear scans and correlate with histology.

5. Statistical analysis.

Progress:

1. Steps 1 and 2 above have been completed.

2. The tibia have been removed and histologic study is underway.

3. Correlation of histology and scans as well as statistical analysis remain to be completed.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: OTO-80-03 Status: Ongoing

Title: Quantitative Assessment of Olfaction Following Nasal Surgery.

Start Date: 22 Jan 80 Est. Comp. Date: Indefinite

Principal Investigators: LTC Ernest Behnke

Facility: LAMC

Dept/Svc: Otolaryngology

Associate Investigators:

Key Words: Assessment, Olfaction, Nasal Surgery

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: None

Periodic Review Results:

Study Objective: The objective is to ascertain if nasal surgery has any effects on the olfactory thresholds as quantitatively measured by the pyridine scale.

Technical Approach: The patient's quantitative olfactory threshold is measured preoperatively and again in 2 weeks, 6 weeks, 3 months, and 6 months, postoperatively. The analysis is carried out using a binary step progression with the chemical, pyridine. In addition, a questionnaire relating to various factors that might influence olfaction is filled out.

Progress: To date a total of 50 patients have been entered in the study. Preliminary results indicate that there is no significant quantitative decrease in olfaction following nasal surgery. In fact there is a minor improvement noted in olfaction. The data is currently being analyzed and correlated. An abstract has been submitted for presentation at the American Academy of Otolaryngology Annual Meeting.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: S-79-01 Status: Terminated

Title: Hemodynamics of Apico-ventricular to Aortic Shunts.

Start Date: 25 Sep 79 Est. Comp. Date: N/A

Principal Investigators:
COL William Heydorn

Facility:
LAMC

Dept/Svc:
Department of Surgery

Associate Investigators:
COL Ronald Bellamy
Division of Combat Casualty Care, LAIR

Key Words: Hemodynamics, shunts

Accumulative MEDCASE Cost: $2631

Est Accumulative OMA Cost: None

Periodic Review Results:

Stuby Objective: To understand the hemodynamic conditions under which a shunt between the left ventricle and the distal aorta or femoral artery that does not incorporate a valve can be safely used.

Technical Approach: Project has been terminated. See original application for details.

Progress: It was possible to apply the technique of left ventricle to aortic bypass in five pigs that were being used for another protocol after the other investigation was finished with them. There was no evidence of elevated left ventricular pressure nor indeed flow from the aorta into the ventricle during diastole. These findings were confirmed by an experiment done at the University of North Carolina. Because of this it was felt that there would be no point in continuing this project and it should be considered terminated.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: Ts-80-01 Status: Ongoing

Title: Human Implantation of the St. Jude Cardiac Valvular Prosthesis.

Start Date: 8 Jul 80 Est. Comp. Date: Indefinite

Principal Investigators:
COL Thomas Bowen
LTC Robert Albus

Facility:
LAMC

Dept/Svc: Thoracic Surgery

Associate Investigators:
COL Michael Barry
COL John S. Clarke

Key Words: St. Jude Cardiac Prosthesis

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: None

Periodic Review Results:

Study Objective: To assess the efficacy of the St. Jude medical cardiac valve prosthesis in patients with a small aortic annulus.

Technical Approach: 1. Patients with a size #19 or #21 aortic or a size #21 or #23 mitral annulus as sized at valve replacement are selected to receive a St. Jude medical prosthesis rather than undergo annulus enlarging procedures.

2. Postoperative routine followup will include evaluation for hemolysis, thrombosis and cardiac function.

Progress: To date, 23 St. Jude medical valve prostheses have been inserted in 18 patients. One patient has suffered valve thrombosis and has undergone re-replacement. There have been no other known valve related failures or complications.

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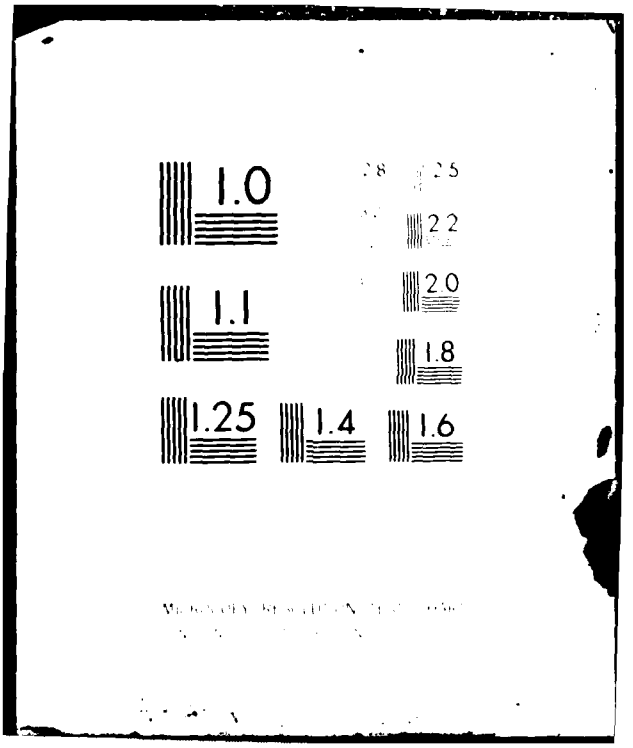
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Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: U-79-03 Status: Ongoing

Title: Large Animal Surgery: An Important Addition to Residency Training in Urology.

Start Date; March 1979 Est. Comp. Date:

Principal Investigator:
LTC Richard Watson

Facility:
LAMC

Dept/Svc:
Urology Service

Associate Investigators:
COL Robert Agee
LTC George Deshon, Jr.

Key Words:

Accumulative MEDCASE Cost:

Est Accumulative OMA Cost:

Periodic Review Results:

Study Objective: To broaden the skills of urologic residents in Urology training and related procedures.

Technical Approach: Each resident is invited to perform selective surgical procedures on an animal model to compliment his educational and technical training in Urology. As outlined in the protocol, carefully planned, supervised, and postoperatively monitored series of new procedures are performed by each resident during the second year of his training as a supplement to his clinical experience.

Progress: Over the past year 5 surgical procedures have been performed utilizing 2 animals and providing surgical experience for 2 urologic residents. Dr. Wiliam Traverso, CCC, LAIR, has provided invaluable input in terms of bowel surgery and surgical techniques in general. The program continues to provide an important and welcome supplement to urologic training for residents.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: U-80-04 Status: Ongoing

Title: Serum Prostatic Acid Phosphatase Determination: Comparative Assessment of Enzymatic and Radioimmunoassay Determinations.

Start Date: Sep 1980 Est. Comp. Date:

Principal Investigators:
Professor Richard Williams, M.D.

Facility: LAMC

Dept/Svc:
Urology

Associate Investigators:
Richard A. Watson, LTC, MC
George E. Deshon, Jr., LTC, MC
Robert Agee, COL, MC

Key Words:

Accumulative MEDCASE Cost: None

Est Accumulative OMA Cost: None

Periodic Review Results:

Study Objective: To cooperate with Professor R. Williams, UCSF, in clinical assessment of the efficacy of serum acid phosphatase by radioimmunoassay as opposed to standard enzymatic methods.

Technical Approach: Letterman Army Medical Center will provide specimens of serum from patients with diagnosed carcinoma of the prostate, either untreated or progressing under treatment. We will provide in addition complete and detailed staging of the patient's disease.

Progress: This study by Professor Richard Williams, supported by samples of serum obtained from selected LAMC patient-volunteers, has been completed this year. Final results, submitted for publication, will play a valuable role in assessing the relative worth of radioimmunoassays as opposed to enzymatic studies. A complete report from Doctor Williams will follow. He has expressed great appreciation for Letterman's role in this project.

Detail Summary Sheet

Date: 1 Oct 81 Prot. No.: U-81-05 Status: Ongoing

Title: Human Prostate Grafts in Nude Mice

Start Date: May 1981 Est. Comp. Date: Oct 1982

Principal Investigators:
CPT Tu-Hi Hong

Facility: LAIR

Dept/Svc:
Urology

Associate Investigators:
CPT Warren Jederberg
COL Robert E. Agee
LTC George E. Deshon, Jr.

Key Words:

Accumulative MEDCASE Cost: $3994

Est Accumulative OMA Cost:

Periodic Review Results:

Study Objective: The main objective is to examine the feasibility of growing human prostatic tissue in nude mice. This involves the investigation of various factors that might influence the outcome of such a heterotransplantation. These factors are: (1) age and sex of the recipient animal. (2) Hormonal manipulation. (3) The different way the tissue was harvested and implanted. (4) Period of incubation of tissue prior to transplantation. (5) Duration of graft.

Technical Approach: Human prostatic tissues were obtained during diagnostic and therapeutic procedures with informed consents. The tissue was incubated in the Rosewell Park Memorial Institute medicum 1640 until time of transplantation. Cell suspensions were injected into the dorsal subcutaneous space with negative results (no graft survived). Subsequently a piece of tissue was placed in the dorsal subcutaneous spacd with some takes of transplant tissue. The tissues were then harvested at the predetermined time and recovered tissues were examined histologically and compared with original histology.

Progress: The summary of investigation so far completed was presented at the 29th Annual James C. Kimbrough Urological Seminar which was held in Denver, Colorado in November, 1981. Currently, we are performing transplantations involving younger animals and with longer duration of graft to investigate these variables on the outcome of this difficult otransplantation of human prostatic tissue.

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: LAIR-81-05 Status: Ongoing

Title: Evaluation of Amniotic Wound Dressings

Start Date: 10 Feb 81 Est Comp Date: March 1982

Principal Investigator:
SFC John Surinchak

Facility: LAMC/LAIR

Dept/Svc:
Combat Casualty Care, LAIR

Associate Investigators:
COL Ronald Bellamy
LTC Craig Winkel

Key Words:
Wound healing, amnion, physiology, wound dressings

Accumulative MEDCASE Cost:	Est Accumulative OMA Cost:	Periodic Review Results:
None	None	

Study Objective: Amnion has been used extensively in burn and indolent ulcer cases. In these situations it has been found to speed wound closure, alleviate pain and suppress bacterial growth. It has not been evaluated as a dressing for full thickness, mechanically induced skin wounds such as those received from bullets, mine blast or artillery rounds. The primary purpose of this investigation is to evaluate the possible use of amnion as a dressing for full thickness skin wounds.

Technical Approach: Ten rabbits will have a $4cm^2$ skin wound created on their backs and have the amniotic dressing applied (changed every other day). Ten additional rabbits, wounded in the same manner, will have the wound site covered with a conventional dressing (Telfa pads). Wound areas will be measured daily to determine rate of healing.

Progress: This investigation is currently in progress. Preliminary results indicate that amniotic dressings accelerate healing by approximately 30% over the controls. No significant difference in the bacterial populations has been observed.

Detail Summary Sheet

Date: 1 Oct 81 Prot No.: CH-81-01 Status: Ongoing

Title: Human Skin for Purposes of Research Concerning Penetration of Chemicals and for Studies of Function.

Start Date: 10 Mar 81 Est Comp Date: Undetermined

Principal Investigators:
LTC Kenneth Black
LTC Roger Bartels
MAJ Jean Jackson

Facility: LAMC

Dept/Svc:
Division of Cutaneous Hazards, LAIR

Associate Investigators:
CPT Warren W. Jederberg
Dr. William G. Reifenrath

Key Words:
Human skin, graft and nude mouse.

Accumulative MEDCASE Cost: N/A

Est Accumulative OMA Cost: N/A

Periodic Review Results:

Study Objective: To obtain human skin for research purposes from patients who voluntarily donate the excess skin which is generated during their plastic surgical procedure at LAMC.

Technical Approach: The skin is taken to LAIR after surgery at LAMC. The skin is trimmed and full or split thicknesses are prepared. The skin is kept at 37 C. in Roswell Park Memorial Institute (RPMI) media No. 1640, containing gentamycin until it is used.

Progress: The Plastic Surgery Service at LAMC has supplied the Division of Cutaneous Hazards at LAIR with 45 specimens of non-diagnostic human skin obtained at surgery and donated for research purposes. 278 nude mice have been grafted with pieces of the skin.

Nine of the grafted mice have been used in metabolic cages for the in vivo study of the penetration of deet, benzoic acid and malathion. Based on

iminary results, the human skin grafted athymic mouse shows promise as a
l which ranks the permeability of compounds in the same order as that
rmined from human studies. Very similar results were obtained using the
n and pig skin grafted mouse models.

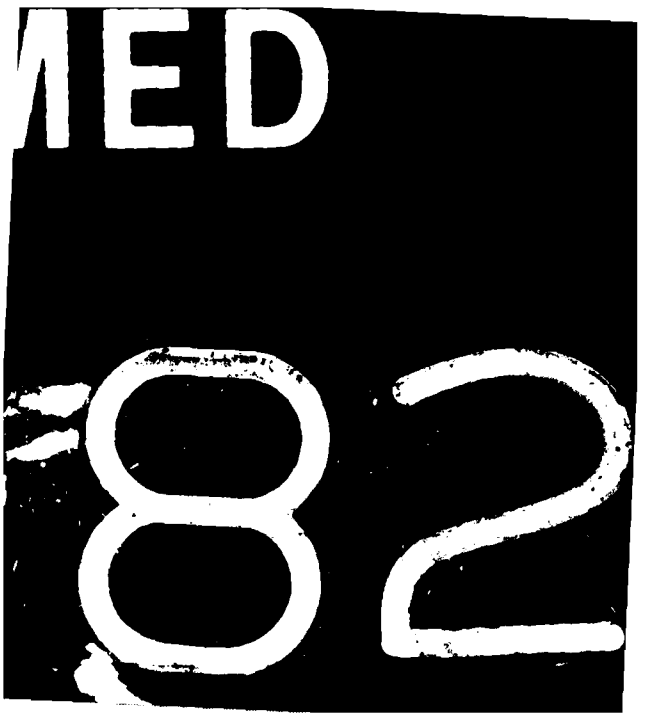
of the human skin grafted mice were sent to the Edgewood Arsenal for
ly of the effect of blistering agents on the skin. No results are
ilable.

specimens of skin have been or will be used for investigation of the
ymatic activity of the skin on an organophosphate substrate. The results
pending.

remainder of the skin specimens have been used for studying various
hniques of applying the skin grafts to the mice. Split thickness topical
fts take well in a high percentage of cases. Subcutaneous grafting has
been fully perfected, but preliminary results are encouraging. A method
obtaining full thickness grafts on the mice is desired.

ıse hepatitis virus has been detected in the nude mouse colony. This is
ıifested by wasting of some of the animals. This problem has not affected
e overall mission. Some consideration has been given to establishing a
rus-free nude mouse colony.

ere is no fixed completion date for this investigation project.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